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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,182	12/31/2003	Don J. Nguyen	42P17637	5004

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EXAMINER	
SHAPIRO, LEONID	
ART UNIT	**PAPER NUMBER**
2629	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/750,182	NGUYEN, DON J.	
	Examiner	Art Unit	
	Leonid Shapiro	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *10,11,13-19 and 28* is/are allowed.

6)☒ Claim(s) *1-9,12 and 20-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2,7,20,24 are rejected under 35 U.S.C. 102(b) as being anticipated by Ono (JP 11-284992 A)).

As to claims 1,20 Ono teaches a method comprising:

receiving an input voltage for a digital power rail of a display (Drawing 1, output of item 2e);

regulating the input voltage to a start-up voltage during a start-up period (Drawing 1, item 5, Solution) said start-up period comprising a predetermined length of time (in the reference time constant of a capacitor C1 and resistance R3)(Drawing 1, item C1,R3, paragraph 0012); and

regulating the input voltage to a steady-state voltage after the start-up period, said steady-state voltage being lower than the start-up voltage (Drawing 1, item 5, Solution).

As to claim 2, the digital power rail of the display powers a panel controller (Drawing 1, output of item 2e and item 6).

As to claim 7, Ono teaches an apparatus comprising:

a digital power rail to receive an input voltage for a display (Drawing 1, output of item 2e);

a voltage regulator to regulate the input voltage to a start-up voltage during a start-up period (Drawing 1, item 5, Solution) said start-up period comprising a predetermined length of time (in the reference time constant of a capacitor C1 and resistance R3)(Drawing 1, item C1,R3, paragraph 0012), and regulate the input voltage to a steady-state voltage after the start-up period, said steady-state voltage being lower than the start-up voltage (Drawing 1, item 5, Solution).

As to claim 24, Ono teaches a system comprising:

a LCD (Drawing 1, item 3); and

a power supply coupled to LCD (Drawing 1, items 2b,2e,5), power supply comprising:

a digital power rail to receive an input voltage for a display (Drawing 1, output of item 2e);

a voltage regulator to regulate the input voltage to a start-up voltage during a start-up period (Drawing 1, item 5, Solution) said start-up period comprising a predetermined length of time (in the reference time constant of a capacitor C1 and resistance R3)(Drawing 1, item C1,R3, paragraph 0012), and regulate the input voltage to a steady-state voltage after the start-up period, said steady-state voltage being lower than the start-up voltage (Drawing 1, item 5, Solution).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3-5,12,21-22,27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono in view of Morita (US 6,727,681 B2).

As to claim 3, Ono does not disclose the start-up voltage is substantially equal to input voltage.

Morita teaches the start-up voltage is substantially equal to input voltage (Fig. 3, items 102,104,108, Col. 8, Lines 11-18).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Morita into Ono system in order to enable quick startup with high efficiency and low power consumption (Col. 1, lines 64-67 in the Morita reference).

As to claims 4,21 Morita teaches passing the input voltage during start-up period (Fig. 3, items 102,104,108, Col. 8, Lines 11-18).

As to claim 5,22 Morita teaches linearly biasing the input voltage down to the steady-state voltage (Fig. 3, items 102,104,108, Col. 8, Lines 11-18).

As to claim 12,27 Morita teaches linear voltage regulator (Fig. 8, items Sw1,SW2,C3-C4, Col. 10, Lines 34-49).

5. Claims 6,8-9,23,25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono as applied to claims 1,7,20,24 above, and further in view of Fukumoto (US 6,927,989 B2).

Ono does not disclose a pulse width modulator with different duty ratios.

Fukumoto teaches a pulse width modulator with different duty ratios (Fig. 1, items 1P,2P,131, Col. 5, Lines 47-56).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Fukumoto into Ono system in order to enable quick startup with high efficiency and low power consumption.

Allowable Subject Matter

6. Claims 10-11,13-19,28 are allowed.

Relative to claims 10-11 the major difference between the teaching of the prior art of record (Ono, Morita and Fukumoto) and the instant invention is that first duty ratio is 1 and second duty ratio is 2.5/3.3.

Relative to claims 13 and 28 the major difference between the teaching of the prior art of record (Ono, Morita and Fukumoto) and the instant invention is that claims 13,28 are detail description of circuit diagrams.

Claims 14-19 depend on claim 13.

Response to Arguments

7. Applicant's arguments filed on 03/15/07 have been fully considered but they are not persuasive:

On page 12, 4th paragraph of Remarks, Applicant's submits that Ono does not suggest, disclose, or enable, nor provide any motivation whatsoever for, increasing a

voltage for a display for a "start-up period comprising a predetermined length of time," as claimed in amended claim 1. However, Ono teaches that start-up period comprising a predetermined length of time (in the reference time constant of a capacitor C1 and resistance R3)(Drawing 1, item C1,R3, paragraph 0012).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Telephone Inquire

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LS
06.06.07

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